

Temporary Covered Source Permit (CSP) No. 0524-01-CT Review
Renewal Application No. 0524-03

APPLICANT: Pineridge Farms, Inc.

**RESPONSIBLE
OFFICIAL:/POC** Ms. Georgette Silva
President
1.808.847.6746

LOCATION Various Locations, State of Hawaii

MAILING ADDRESS 855 Umi Street
Honolulu, Hawaii 96819

CONTACT Mr. Joaquin Silva
Vice President
1.808.306-5646

SIC 1442: Construction Sand and Gravel

EQUIPMENT One (1) 300 HP Caterpillar Diesel Engine (Nonroad Engine)
Model No. 3306B DITA, Serial No. 6AZ33009
Fuel Consumption = 15.4 gal/hr; Fuel Oil No. 2 (0.5% Sulfur
Content)
Exhaust Diameter = 0.127m, Height = 5.0m
Actual Flow Rate = 0.8415 m³/s; Temp = 793K

295 TPH BL-Pegson Jaw Crusher
Model No. Premiertrak, Serial No. QM014935
Production capacity = 295 TPH

PERMIT BACKGROUND

There are no proposed modifications to the equipment or operational changes.

Material to be processed consists of basalt rock, other types of rocks encountered at job sites within the State of Hawaii and concrete or other materials suitable for crushing and recycling.

Material is loaded into the hopper of the BL Pegson Premiertrak Jaw Crusher. From the hopper the material travels into the jaw crusher, with dirt and small rocks falling through the hopper onto a chute or side conveyor. The crushed material falls onto the main conveyor belt and is transported onto a stockpile.

The plant is equipped with three (3) water spray bars located at the feeder, the side conveyor belt, and below the crusher.

The 295 TPH crusher is equipped with tracks and powered by the 300 HP Caterpillar Diesel Engine.

Diesel Fuel is stored in a portable 1,000 gallon diesel fuel tank.

AIR POLLUTION CONTROLS

Water suppression will be used as necessary to control fugitive dust.

APPLICABLE REQUIREMENTS

Hawaii Administrative Rules (HAR)

Title 11 Chapter 59, Ambient Air Quality Standards

Title 11 Chapter 60.1, Air Pollution Control

Subchapter 1, General Requirements

Subchapter 2, General Prohibitions

11-60.1-31 Applicability

11-60.1-32 Visible Emissions

11-60.1-33 Fugitive Dust

11-60.1-38 Sulfur Oxides from Fuel Combustion

Subchapter 5, Covered Sources

Subchapter 6, Fees for Covered Sources, Noncovered Sources, and Agricultural Burning

11-60.1-111 Definitions

11-60.1-112 General fee provisions for Covered sources

11-60.1-113 Application fees for Covered sources

11-60.1-114 Annual fees for Covered sources

Subchapter 10, Field Citations

New Source Performance Standards

40 Code of Federal Regulations (CFR) Part 60. Subpart OOO – National Emission Standards for Nonmetallic Mineral Processing Plants **is applicable** to the crusher because equipment was manufactured after 1983 and the primary crusher has a capacity greater than 150 TPH.

40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines **does not apply** to the diesel engine. The diesel engine is a nonroad engine in accordance with 40 CFR §1068.30 (1)(i). Nonroad engines are exempt from the 40 CFR Part 60, Subpart IIII.

This source is **not subject to 40 CFR Part 61 or Part 63** as no hazardous air pollutants are emitted at significant levels (≥ 10 TPY HAP or ≥ 25 TPY for total HAPs) and this source is not subject to any regulation under Part 61 or 63.

40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAPE) – **does not apply** to this facility because the engine will be operated as a nonroad engine. Nonroad engines are exempt from 40 CFR Part 63, Subpart ZZZZ.

This source is **not subject to PSD** (Prevention of Significant Deterioration) requirements because it is not a major stationary source as defined in 40 CFR 52.21 and HAR, Title 11, Chapter 60.1, Subchapter 7.

This source is **not subject to CAM** (compliance assurance monitoring) since the proposed equipment is not classified as a major source (criteria pollutant > 100 TPY); has no pre-control device potential emissions exceeding applicable major source thresholds; nor fitted with an “active” air pollution control device; and not or not part of a facility with total emissions exceeding major source threshold.

The air emissions reporting rule (AERR) is **not applicable** because emissions from the facility do not exceed reporting levels pursuant to 40 CFR 51, Subpart A.

The Clean Air Branch requests annual emissions reporting from those facilities that have facility wide emissions exceeding in-house reporting levels and for all covered sources. Annual emissions reporting **will be required** because this facility is a covered source.

This source **is not subject to a BACT** (Best Available Control Technology) analysis because this application is for a renewal with no proposed modifications. BACT analysis is required for new sources and significant modifications to sources that have the potential to emit or increase emissions above significant levels.

A major source as defined in Section 11-60.1-1 of HAR, Title 11, has the potential to emit any HAP of 10 TPY or more or 25 TPY or more of any combination of HAPs, or 100 TPY or more of any criteria air pollutant. Calculated emission(s) do not exceed these levels and thus, this facility **is not classified** as a major source.

A synthetic minor source is a facility that is potentially major (as defined in HAR 11-60.1-1), but is made non-major through federally enforceable permit conditions. This facility **is not classified** as a synthetic minor source because potential emissions do not exceed the major source threshold when the facility is operated at its maximum capacity continuously for 8,760 hours per year.

INSIGNIFICANT ACTIVITIES

No proposed insignificant activities.

ALTERNATIVE OPERATING SCENERIOS

No proposed alternative operating scenario.

PROJECT EMISSIONS

Total GHG emissions on a CO₂e basis using the global warming potential (GWP) of the GHG are shown in the table below for one (1) 300 HP Caterpillar Diesel Engine (Nonroad Engine) based on 2,080 hours per year.

Table 1 - GHG EMISSIONS						
Power (HP)	Diesel #2 ^a MMBtu/hr	GHG	Emission ^b Factor (lb/MMBtu)	Potential Emissions (TPY)	GWP	CO ₂ e Emissions (TPY)
300	2.11	CO ₂	163	326.5	1	357.77
		CH ₄	0.006	0.01	25	0.36
		N ₂ O	0.001	0.0003	298	0.86
					Total CO ₂ e	359.0
a. Based on 15.4 gallons of diesel per hour at 0.137 MMBtu/gal						
b. Emission Factors determined from EPA document Emission Factors for Greenhouse Gas Inventories.						

TOTAL EMISSIONS

Total facility emissions are summarized in Table 2 below.

Table 2: Total Facility Emissions and Trigger Levels (TPY)				
Pollutant	Emissions based on 2,080 hr/yr of Operation	Emissions based on 8,760 hr/yr (ANNUAL – NO LIMIT)	AERR Level	DOH Level
CO	2.08	8.78	1000	250
NOx	9.68	40.76	100	25
PM-30(TSP)	1.18	9.85	-	25
PM-10	1.10	8.82	100	25
PM-2.5	0.68	2.91	100	-
SOx	1.11	4.67	100	25
TOC/VOC	0.77	3.23	100	25
HAPs	0.0092	0.0388	5	5
Based calculation from previous permit.				

Individual equipment emissions are summarized in Table 3 below.

Table 3: Total Equipment Emissions (TPY): Limited, Annual			
Pollutant	Diesel Engine	Jaw Crusher	TOTAL
CO	2.08, 8.78	--	2.08, 8.78
NOx	9.68, 40.76	--	9.68, 40.76
PM-30(TSP)	0.68, 2.86	0.50, 6.99	1.18, 9.85
PM-10	0.68, 2.86	0.42, 5.96	1.10, 8.82
PM-2.5	0.68, 2.86	0.0037, 0.053	0.68, 2.91
SOx	1.11, 4.67	--	1.11, 4.67
TOC/VOC	0.77, 3.23	--	0.77, 3.23
HAPs	0.0092, 0.0388	--	0.0092, 0.0388
Based calculation from previous permit. Emission factors were verified against current AP 42 standards. Assume all PM is PM-10 for diesel engine.			

FACILITY EMISSIONS CALCULATIONS

No modifications were made to the equipment or operational limits. See previous review for calculations.

AIR QUALITY ASSESSMENT

An ambient air quality analysis (AAQA) is generally performed for new or modified sources. Since no modification that will increase emissions is proposed for this existing facility, an assessment was not performed for this application review.

SIGNIFICANT PERMIT CONDITIONS

1. The total operating hours of the mobile crushing unit, as measured by the hours of operation of the diesel engine, shall not exceed 2,080 hours per rolling twelve-month (12-month) period.

2. The diesel engine shall be fired only on fuel oil no. 2 with a maximum sulfur content not to exceed 0.5% by weight.

Reason: Proposed by the applicant.

3. The mobile crusher shall be operated as a stand-alone unit. Operation of the mobile crusher with any other stone processing equipment is prohibited without prior written approval from the Department.

Reason: Equipment would be subject to 40 CFR Part 60. Subpart OOO.

CONCLUSION

Based on the information submitted by Pineridge Farms, Inc., it is the determination of the Department of Health that the proposed facility will be in compliance with the Hawaii Administrative Rules, Chapter 11-60.1 and State and Federal ambient air quality standards.

Issuance of temporary CSP No. 0524-01-CT is recommended subject to the permit conditions, public review, and EPA comment period.

Joseph Baumgartner
September 26, 2014